

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (canceled).

2. (currently amended) A tool for metal cutting machining a surface in an opening, the tool comprising:

a cutter tip having at least one geometrically defined cutting edge, wherein the cutter tip is a hexagonally shaped indexable tip and wherein an angle between each side of the cutter tip and an adjacent side is substantially the same for each side of the cutter tip;

the cutter tip having a front side with at least one clamping notch having a V-shaped cross-section formed in the front side;

two supporting regions in the tool for supporting the cutter tip, the supporting regions having support surfaces against which the cutter tip rests, and the support surfaces of the supporting region are oriented with respect to each other at an angle, the supporting regions also being so oriented that a line bisecting the angle between the support surfaces runs essentially perpendicular to an active one of the cutting edges, which is the edge that removes metal chips from the surface in the opening, wherein the cutter tip is turnable six times to make six cutting edges available for machining;

a clamping claw which holds the cutter tip to the supporting regions, the clamping claw comprising a clamping lip; wherein

the clamping lip comes to rest on a front side of the cutter tip and engages the clamping notch, and wherein the tool and cutter tip thereof are both to be operable for metal cutting machining of valve seats in cylinder heads of internal combustion engines.

3. (original) The tool of claim 2, wherein the tool includes a main body and the supporting regions are formed in the main body.

4. (previously presented) The tool of claim 2, wherein the tool has a main body and inserts in the main body are positioned for defining the respective supporting regions.

5. (original) The tool of claim 4, wherein the inserts are essentially rectangular cross section shaped elements.

6. (original) The tool of claim 4, wherein the inserts are pin-shaped elements.

7. (original) The tool of claim 4, wherein the main body is comprised of a material of a first hardness and the inserts are comprised of a material of a greater hardness than the hardness of the main body.

8. (original) The tool of claim 7, wherein the inserts are of a material selected from at least one of the group consisting of metal carbide, ceramic and cubical boron nitride.

9. (original) The tool of claim 2, wherein the main body is shaped to define clearances around the cutting tip at least in regions of the tool at the supporting regions for the cutting tip.

10. (currently amended) The tool of claim [[1]] 2, further comprising a feed for at least one of coolant and lubricant located in the tool for feeding at least one of coolant and lubricant to the cutting edge.

11. (currently amended) The tool of claim 10, ~~further comprising a~~ wherein the clamping claw which holds the cutting tip to the supporting regions; ~~and~~ includes the feed for at least one of coolant and lubricant ~~is provided in the clamping claw.~~

12. (original) The tool of claim 11, wherein the feed for at least one of coolant and lubricant includes an elongate coolant outlet in the claw, the outlet runs essentially parallel to the then active cutter edge.

Claims 13-15 (canceled).

16. (original) The tool of claim 2, wherein the cutter tip is tipped with cubical boron nitride.

17. (original) The tool of claim 2, wherein the cutter tip has an external layer of cubical boron nitride for cutting purposes.

18. (original) The tool of claim 2, wherein the cutter tip has a flank which includes regions of different angles of inclination.

Claim 19 (canceled)

20. (currently amended) A method for metal cutting machining of a surface in an opening comprising:

operating a tool to metal cut machine a surface in an opening, the tool comprising:

a cutter tip having at least one geometrically defined cutting edge, wherein the cutter tip is a hexagonally shaped indexable tip and wherein an angle between each side of the cutter tip and an adjacent side is substantially the same for each side of the cutter tip;

the cutter tip having a front side with at least one clamping notch having a V-shaped cross-section formed in the front side;

two supporting regions in the tool for supporting the cutter tip, the supporting regions having support surfaces against which the cutter tip rests, and the support surfaces of the supporting region are oriented with respect to each other at an angle, the supporting regions also being so oriented that a line bisecting the angle between the support surfaces runs essentially perpendicular to an active one of the cutting edges, which is the edge that removes metal chips from the surface in the opening, wherein the cutter tip is turnable six times to make six cutting edges available for machining;

a clamping claw which holds the cutter tip to the supporting regions, the clamping claw comprising a clamping lip; wherein

the clamping lip comes to rest on a front side of the cutter tip and engages a clamping notch, and wherein the tool and cutter tip thereof are both to be operable for metal cutting machining of valve seats in cylinder heads of internal combustion engines; and

wherein the cutter tip is not required to be reset or adjusted when a respective active cutting edge thereof becomes worn.

21. (original) The method of claim 20, further comprising displacing the tool in the direction of a central axis of the opening being machined during machining of the metal surrounding the opening.

22. (original) The method of claim 20, wherein the cutter tip is an indexable tip.

23. (previously presented) A tool for metal cutting machining a surface in an opening, the tool comprising:

a cutter tip having at least one geometrically defined cutting edge, wherein the cutter tip is a polygon shaped indexable tip and wherein an angle between each side of the cutter tip and an adjacent side is substantially the same for each side of the cutter tip;

the cutter tip having a front side with at least one clamping notch having a V-shaped cross-section formed in the front side;

two supporting regions in the tool for supporting the cutter tip, against which the cutter tip rests, and the supporting regions are oriented with respect to each other at an angle, the supporting regions also being so oriented that a line bisecting the angle between the supporting regions runs essentially perpendicular to an active one of the cutting edges, which is the edge that removes metal chips from the surface in the opening, wherein the cutter tip is turnable to make multiple cutting edges available for machining;

a clamping claw which holds the cutter tip to the supporting regions, the clamping claw comprising a clamping lip; wherein

the clamping lip comes to rest on a front side of the cutter tip and engages the clamping notch, and wherein the tool and cutter tip thereof are both to be operable for metal cutting machining of valve seats in cylinder heads of internal combustion engines..

24. (new) The tool of claim 2, wherein the cutter tip is an indexable tip.

25. (new) The tool of claim 2, wherein the cutter tip hexagonal in shape.